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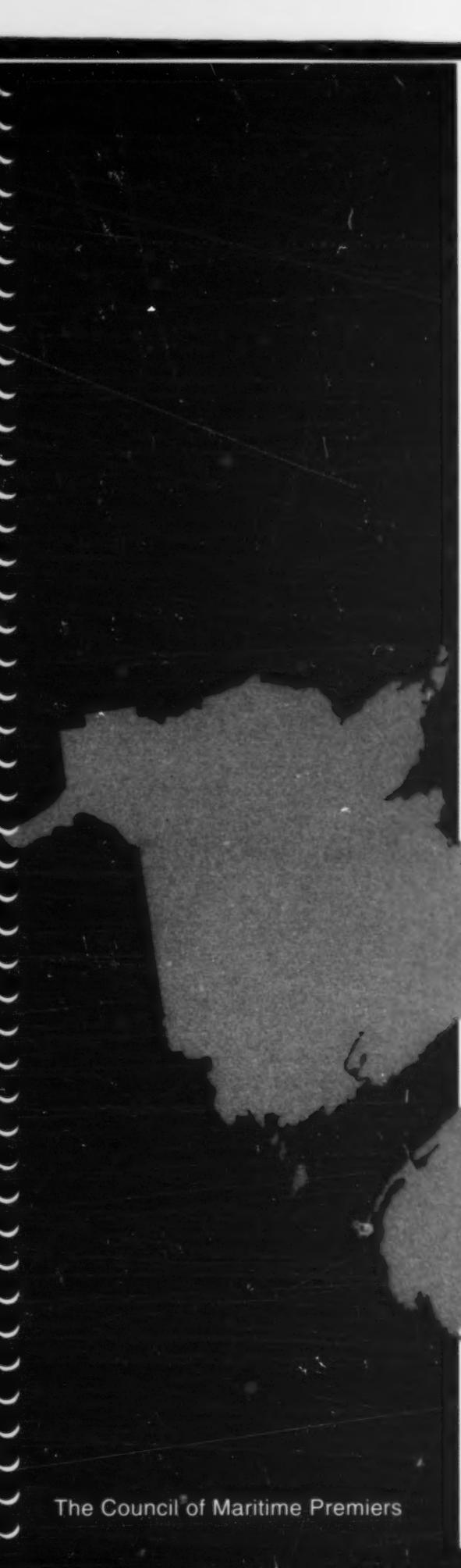
A Lasting Legacy: the impact of family educational background on graduate outcomes

September 2004



The Council of Maritime Premiers

Le Conseil des premiers ministres des Maritimes

A Lasting Legacy:
the impact of family educational background on graduate outcomes

September 2004

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1. Introduction

1.1 Context and issues

Access to post-secondary education, regardless of socio-economic background, has long been a major concern and is one of the keystones of government policies. Over time, governments have made changes in their student financial assistance programmes with this objective in mind. The intent has generally been, within other constraints, to maintain and enhance access particularly for students coming from less advantaged socio-economic backgrounds. The fact that, as this study demonstrates, graduates from households with lower levels of parental educational attainment were as successful in their labour market outcomes as their peers from more highly educated family backgrounds speaks to the role university education plays as a social equalizer. Indirectly, it also speaks to the role of government financial assistance programmes in enabling access to university education for those demonstrating the greatest need.

Graduates from households with lower levels of parental educational attainment were as successful in their labour market outcomes as their peers from more highly educated family backgrounds. This speaks to the role university education plays as a social equalizer. Indirectly, it also speaks to the role of government financial assistance programmes in enabling access to university education for those demonstrating the greatest need.

Continued achievement of these objectives is essential, especially in a knowledge-based economy. Shifts in patterns of access can have a profound long-term impact on the nature of our society. They can affect the level of participation in post-secondary education among various socio-economic groups, particularly in an era where further education beyond that first post-secondary degree is increasingly being demanded.

Changes in patterns of access, and within student financial assistance policies, must be monitored in light of a broad range of other interacting variables such as measures to manage fiscal constraints, rising tuition costs, changes to the loan-grant balance, gender wage gaps, and graduate decisions on whether or not to return for further study. Unintended– as well as intended results–have to be explored. This study is intended to stimulate more detailed analysis of areas where there have been significant changes and to provoke policy thinking about the potential impact these changes may have on access to post-secondary education and the characteristics of the student population.

This analysis looks at Maritime Provinces Higher Education Commission (MPHEC) data from the *Survey of 1999 Maritime University Graduates in 2001* in the context of changes in government student financial assistance policies at both federal and Maritime provincial levels.

The last major changes to the Canada Student Loan Program were made in 1994-1995 - one of the most notable being the increase in loan limits from $105 to $165 a week. At approximately the same time, Maritime provincial policies also underwent change with the goal of making more money available to students. In so doing, provincial financial assistance moved away from non-repayable grants and bursaries to loans. In 1993-1994, New Brunswick's bursary programme was replaced with a loan/bursary programme. In the same year, Nova Scotia moved from a provincial bursary programme to a provincial loan programme with remission. In 1994-1995, Prince Edward Island adopted a student aid

programme similar to that of Nova Scotia. The significant impacts of these modifications (and the compounding impact of the increased cost in obtaining a post-secondary education) became evident by rising student debt levels. Both levels of government responded to this transition by implementing and/or amending several forms of repayment assistance, including: interest relief and interest remission programmes, debt reduction programmes, and the Canada Study Grant.

Another significant initiative was the establishment of the Canada Millennium Scholarship Foundation. In its 1998 Budget, the federal government announced, as part of its Canadian Opportunities Strategy, the creation of the Canada Millennium Scholarship Foundation "the largest single investment ever made by a federal government to support access to post-secondary education for all Canadians."[1] The government committed an initial 10-year endowment of 2.5 billion dollars noting that through the 100,000 scholarships made available each year for the next ten years, low to middle income students would be able to access post-secondary education.

Over the next two years, agreements were signed with provincial and territorial governments and, in January 2000, the Foundation confirmed and assigned over 90,000 bursaries. While the establishment of the Canada Millennium Scholarship Foundation will help ease some of the financial burdens of post-1999 graduates, the graduates in this survey were not affected. Further still, the 2004 Federal Budget proposals to increase the Canada Student Loan limits from $165 to $210 per week may detract from the assistance provided by the Canada Millennium Scholarships. While this increase is meant to assist students with rising costs, it also opens the door to even higher debt levels.

As noted in the Canada Millennium Scholarship Foundation's *The Price of Knowledge*,[2] "major changes in average student debt levels can...occur fairly rapidly" and these changes in student debt are for the most part caused by cumulative changes in student financial assistance programme rules and restrictions. Since family income is a major determinant in eligibility for these government loans, it therefore can be expected that students from lower family income brackets will incur higher debt levels from this source. The issue is whether and to what extent these increased debt levels result in student decisions not to access further educational opportunities, thereby possibly widening socio-economic gaps.

1.2 Purpose and approach

This study explores relationships between parental levels of educational attainment, borrowing patterns, debt levels, and decisions about returning to study among first degree holders from the Class of 1999.

This study is intended to provoke further investigation, analysis and debate on the issues noted above. It explores relationships between parental levels of educational attainment, borrowing patterns, changes in debt and repayment levels, and decisions about returning to study within a few years of graduation among first degree holders from the Class of 1999. A first degree holder is defined as a graduate who completed a bachelor's degree and who enrolled in this programme with a high school diploma as his/her highest completed level of education.

For this study, parental educational attainment is used as a key variable. While the most direct approach may be to compare graduate outcomes on the basis of family income, the MPHEC survey cannot collect, within the parameters of its survey, reliable information to characterize graduates' familial socio-economic status while growing up.[3] Respondents were however asked to report the highest level of education attained by their mothers and fathers. We are therefore using the highest level of parental educational attainment as a proxy for family income in this analysis, though this is not a perfect proxy given the fact that nearly one-third (31%) of graduates from the highest educational backgrounds met the financial eligibility requirements for government loans.

Measuring the long term impact of parental educational attainment on graduate outcomes is also important in its own right because of the strong link between it and participation in university. A recent study showed that "participation in postsecondary education generally and university in particular is more dependent on parental education than parental income."[4] Further, both parental levels of education and student borrowing patterns are linked to the likelihood that a graduate will pursue advanced study.

1.3 Data sources and key variables

Statistics presented in this study are based on data from the MPHEC's *Survey of 1999 Maritime University Graduates in 2001*. Where appropriate, comparisons are made to the Class of 1996 surveyed in 1997. All statistics are based on weighted data.The analysis is limited to a subsample (n=2317) of graduates referred to as first degree holders. A first degree holder is defined as a graduate who completed a bachelor's degree and who enrolled in this programme with a high school diploma as his/her highest completed level of education. Parental educational levels are broken down into three broad categories:

- High school diploma or less (n=614);
- Post-secondary education (PSE) below bachelor's degree (includes trade, community college or hospital-based certificates or diplomas, and completion of a university certificate or diploma below the bachelor's level, or attendance at university without earning a credential) (n=605); and
- Bachelor's degree or above (includes bachelor's, first professional, master's or PhD degrees, and graduate level certificates/diplomas) (n=977).

These categories combine both the mother's and father's highest level of education, and the category is assigned based on the highest level of education of the pair. Excluded from analysis are those graduates who did not know or declined to report the highest level of education of either parent (n=86).

1.4 Key findings

As some might expect, our analysis reveals significant changes in borrowing patterns following the introduction of government loan policy changes at both the federal and

Maritime provincial levels. These changes, coupled with tuition and other fee increases, contributed to an eight point increase in the percentage of Maritime university graduates who report borrowing money to finance their education, and a 30% increase in the average amount borrowed over a three-year period (Class of 1996 vs Class of 1999).[5]

Two years after graduation, graduates from less educated family backgrounds are much less likely to be debt-free, owe more money, and have a higher debt-to-earnings ratio than their peers from more highly educated backgrounds.

By the time they graduated, nearly six-in-ten (58%) first degree holders had borrowed money from one or more sources. This borrowing rate varies significantly ($p<0.001$) by parental level of educational attainment, ranging from nearly three-quarters (74%) of graduates whose parents' highest level of educational attainment was a high school diploma or less, to just under half (47%) of graduates coming from a household where the highest level of education was a bachelor's degree or above. Two years after graduation, graduates from less educated family backgrounds are much less likely to be debt-free, owe more money on average, and have a higher debt-to-earnings ratio than their peers from more highly educated backgrounds.

In the three years between the two cohorts (1996 and 1999), the percentage of graduates from households where the highest level of educational attainment was a bachelor's degree or above increases by five percentage points. At the same time, the percentage of graduates from households where the highest level of educational attainment was a high school diploma or less decreases six percentage points. This shift appears to be linked to family educational background. Furthermore, the correlation between a higher level of parental educational attainment (bachelor's degree or above) and a higher rate of participation in post-secondary education seems to be stronger for males. This emerging trend will require longer term monitoring to assess its impact.

Coming from a household where the highest level of educational attainment was a bachelor's degree or above increases the odds of returning to study by 1.4 times.

This study uncovers another important finding: not only does family educational background affect accessibility to university and completion of the first degree, but it is also having a lasting impact on whether or not graduates will return to study after obtaining their first bachelor's degree. Specifically, among first degree holders, coming from a household where the highest level of educational attainment was a bachelor's degree or above increases the odds of returning to study by 1.4 times. These odds are further affected by borrowing patterns of graduates. Increased borrowing, and borrowing from financial institutions, both decrease the odds of returning to further studies.

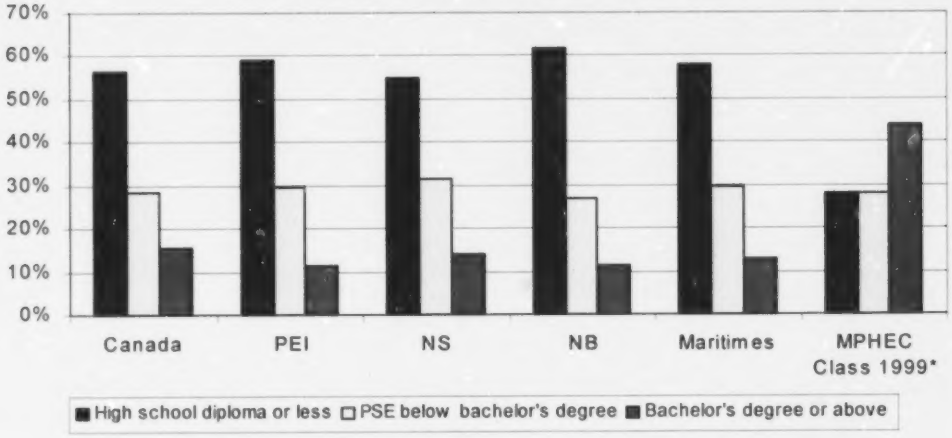
1.5 Future directions

This study shows a definite shift towards higher debt loads and a concomitant increase in the proportion of graduates coming from more highly educated parental backgrounds, particularly with respect to the pursuit of further studies. As greater numbers of graduates from more highly educated family backgrounds begin to realize the returns of pursuing advanced study, we may observe the emergence of a rising earnings gap based on family educational background. This warrants continued monitoring of graduate outcomes based on parental educational attainment. Specific questions to that effect are raised in the conclusion.

2. Profile

The number of Maritimers who have attained a bachelor's degree or above makes up a relatively small (13%) percentage of the population. Among Canadians, this percentage is slightly larger (15%) (Figure 1). It is quite apparent in the survey findings that family educational background influences educational choices and therefore educational attainment.[6,7] Although the statistics are not directly comparable, results indicate that the educational background of 1999 Maritime university first degree holders is quite different from the general population's, with the majority (44%) coming from households where at least one parent had completed a bachelor's degree or above (Figure 1). This is similar to other studies that show "the university undergraduate population [is] drawn from families that [are] better educated than the population as a whole."[8] Support for this can be found in O'Heron's[9] study, where up to 47% of students enrolled in university were found to have fathers who went to university. Another study[10] found that 36% of graduates had mothers, and 47% had fathers, who had attained a university degree or professional certification.

Figure 1
Educational attainment of the population aged 15 years and over (Census 2001) and the highest level of parental educational attainment of first degree holders among Class of 1999 Maritime university graduates



*MPHEC *Survey of 1999 Maritime University Graduates in 2001*; Highest level of parental educational attainment of Class of 1999 graduates

Source: Statistics Canada 2001 Census

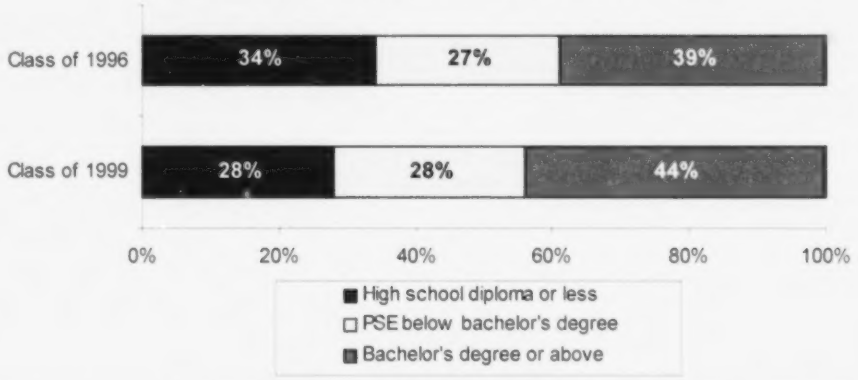
This same pattern exists among those graduates living in the Maritimes at least 12 months prior to enrolling in their bachelor's degree programme. This subgroup of Maritime residents represents 83% of all Class of 1999 first degree holders. Within this group, 42% came from households where at least one parent had completed a bachelor's degree or above, 28% from households where the highest level of education was PSE below bachelor's degree, and 30% from households where the highest level of education was a high school diploma or less.

The distribution of graduates by highest level of parental educational attainment over time among two cohorts of Maritime university graduates (the Class of 1996 and the Class of 1999) were compared.

In the three years between the Class of 1996 and the Class of 1999, the percentage of graduates from households where the highest level of educational attainment was a bachelor's degree or above increases five percentage points. At the same time, the percentage of graduates from households where the highest level of educational attainment was a high school diploma or less decreases six percentage points.

As Figure 2 demonstrates, in the three years between the two cohorts, the percentage of graduates from households where the highest level of educational attainment was a bachelor's degree or above increases five percentage points. At the same time, the percentage of graduates from households where the highest level of educational attainment was a high school diploma or less decreases six percentage points. Notably, this trend remains when comparing only those graduates living in the Maritime provinces 12 months prior to enrolling in their degree programme. These shifts in the parental educational attainment profile of first degree holders are significant ($p<0.000$).

Figure 2
Distribution of first degree holders by highest level of parental educational attainment, by graduating class



It is uncertain whether the observed shifts are part of a longer-term trend. However, other research has indicated that university participation rates have not increased as fast for young people from family backgrounds of low socio-economic status.[11] Given the important role family educational background plays in accessibility to post-secondary education, and in particular, university level education, it is crucial that this characteristic continues to be monitored among graduating classes.

A recent trend in university enrolments is that women outnumber men. While just over twenty years ago, proportions were evenly split between the genders (50.1% female in 1980-1981), increases in women's proportions of university enrolments resulted, by 1990-1991, in women moving ahead of men (56% to 44%).[12] When looking at the actual numbers of female enrolments, this is not surprising as the number of women attending Maritime universities full-time increased by 79.9% over the last two decades, from 20,899 in 1980-1981 to 37,601 in 2000-2001. The bulk of the increase (63%) took place between 1980-1981 and 1990-1991, followed by an increase of 10.4% between 1990-1991 and 2000-2001. Between 1980-1981 and 1990-1991, however, men's university enrolments increased at a much slower rate than women's (26.8%) and then declined 3.6% (from 26,765 to 25,791) in the following ten years.[13] This trend in rising numbers of female university enrolments, without the same rise in male enrolments, continued into the following decade and by 2000-2001, women accounted for 59.3% of all full-time students enrolled in Maritime universities.[14]

Survey findings shed some light on possible explanations for this trend, including the fact that family educational background does not appear to have the same level of influence on

university participation by women as compared to men. Specifically, the correlation between a higher level of parental educational attainment (bachelor's degree or above) and a higher rate of participation seems to be stronger for males. This emerging trend should be monitored to fully assess its impact on the make-up of the university student population, and eventually the labour market. Two figures (3a and 3b) illustrate this point.

Figure 3a shows the distribution of men and women by parental educational attainment group. Nearly half (48%) of male first degree holders came from households where the highest level of parental educational attainment was a bachelor's degree or above, as compared to 42% of female graduates. Figure 3b illustrates the gender profile within each parental educational attainment group. The percentage of men (47%) from households where the highest level of educational attainment was a bachelor's degree or above is greater than expected, and is the closest to parity of the three groups. The question of whether there is a socio-economic status component to the skewed gender ratios in university enrolment, with parental educational attainment having a greater influence on men's university attendance, warrants further investigation. Subsequent analyses in this study will include an examination of gender as an independent variable.

Figure 3a
Distribution of male and female first degree holders by highest level of parental educational attainment

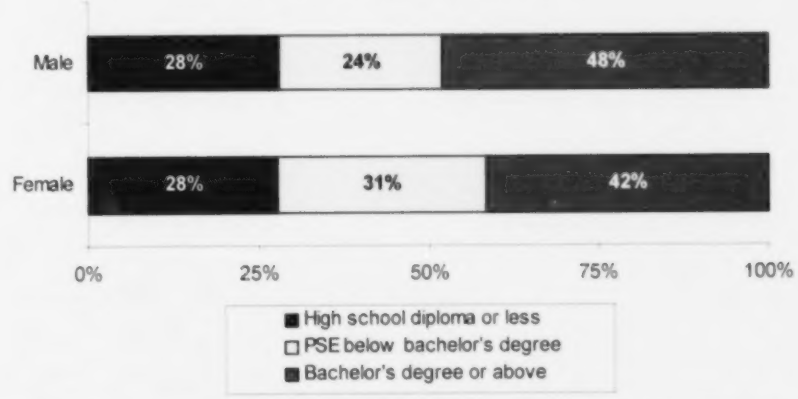
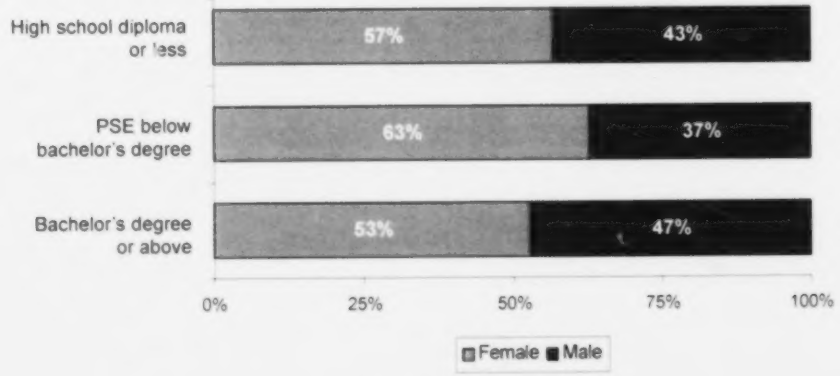


Figure 3b
Gender profile of parental educational attainment groups



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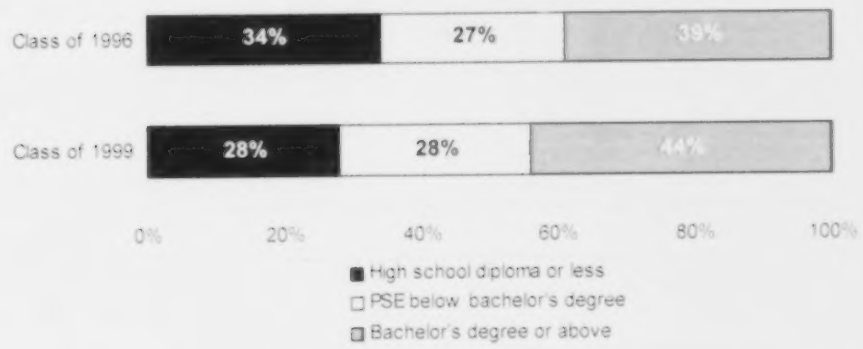

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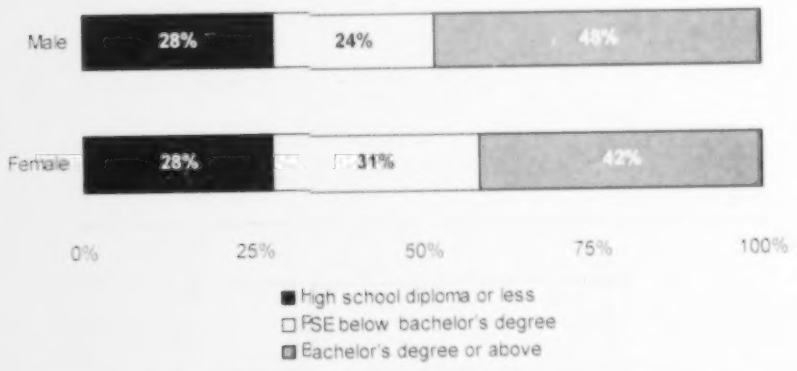

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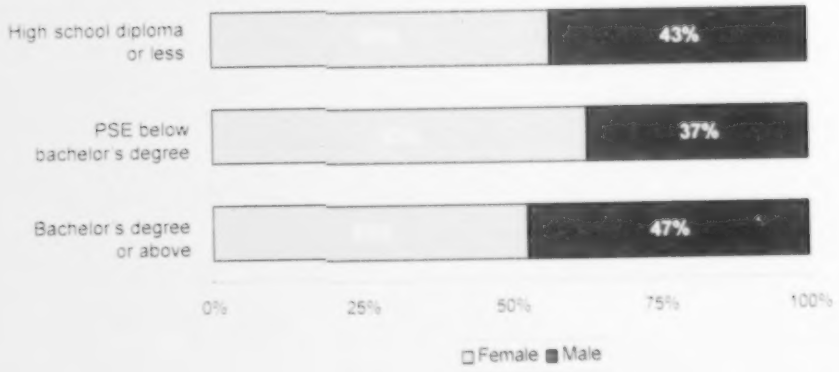


3. Labour market outcomes

Employment outcomes are not affected by the level of parental educational attainment.

In this section we examine the relationship between parental educational attainment, gender, and employment outcomes. Findings indicate that employment outcomes are not affected by the level of parental educational attainment. These findings are based on an examination of data involving labour force status, full-time and permanent employment, time to first job, extent skills acquired during the 1999 degree programme were used on the job, and the extent to which the job was related to the degree obtained in 1999. Similarly, there are no differences in these measures by gender, with the exception that women are less likely than men to have been employed in a full-time or permanent job.[15]

Average weekly full-time earnings do not differ significantly by parental level of educational attainment. Earnings among first degree holders are however affected by gender. Two years after graduation, women from the 1999 graduating class earned, on average, $580 per week, or 78% of men's earnings ($741). Further details on the gender wage gap may be found in a study by the MPHEC entitled: "The Gender Gap in Employment Outcomes of University Graduates".[16] Earnings data in particular are an important part of overall financial status and will be used to calculate a debt-to-earnings ratio.

Graduates exposed to higher levels of education (i.e., a bachelor's degree or above) within their families are more likely to pursue this level of education themselves.[17] The reason for this is not only the direct influence of educational background, but also that higher levels of education are generally associated with greater earnings - making a university education more affordable for students from more advantaged backgrounds. As a major component characterizing socio-economic background, parental educational attainment is used as a proxy for family income which in turn determines eligibility for government student loans. The sections that follow explore the relationship between parental educational attainment and borrowing and repayment patterns.

4. Borrowing patterns

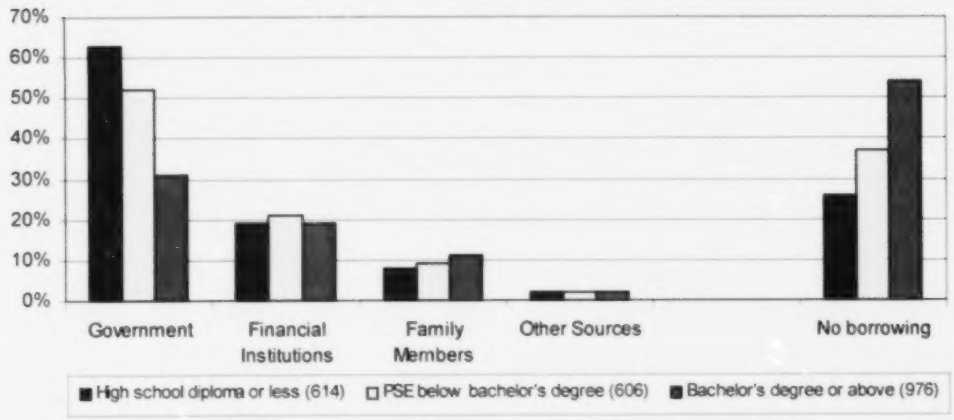
By the time they graduated, nearly six-in-ten first degree holders had borrowed money from one or more sources.

Borrowing rates vary significantly by parental level of educational attainment.

Applying for student loans and taking on substantial debt for the first time is a rite of passage for many students as they enter university. By the time they graduated, nearly six-in-ten (58%) first degree holders had borrowed money from one or more sources. However, this borrowing rate varies significantly ($p<0.001$) by parental level of educational attainment, ranging from nearly three-quarters (74%) of graduates whose parents' highest level of educational attainment was a high school diploma or less, to just under half (47%) of graduates coming from a household where the highest level of education was a bachelor's degree or above. Nearly two-thirds (64%) of graduates whose parents had achieved PSE below a bachelor's degree report borrowing.

Graduates who borrowed to finance their education drew upon on a variety of sources, including government student aid programmes, financial institutions, family members and other sources. As Figure 4 illustrates, graduates' borrowing patterns (including debt levels, terms and sources of financial assistance) are closely correlated with parental level of educational attainment. This is particularly true for government loans and non-borrowing.

Figure 4
Source of loan by parental level or educational attainment among first degree holders*

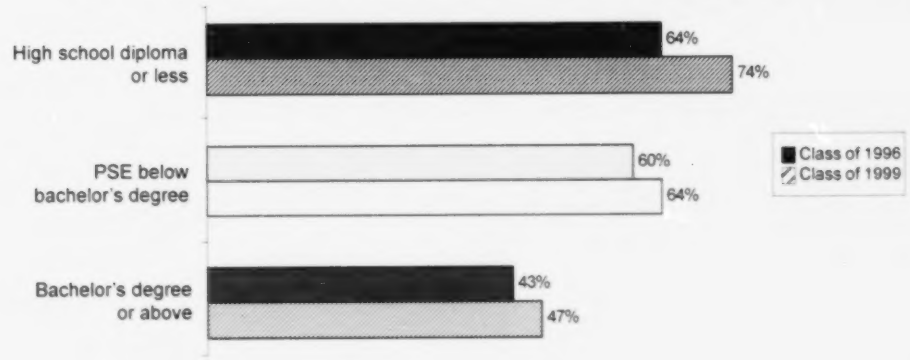


*Note: It is possible for respondents to have borrowed from more than one source.

The borrowing patterns illustrated in Figure 4 also indicate that parental educational attainment is not a perfect proxy for family income. The nearly one-third (31%) of graduates from households where the highest level of educational attainment was a bachelor's degree or above who borrowed from government student loan programmes did meet the financial need eligibility requirements for these loans.

Comparing the Classes of 1996 and 1999 shows that overall borrowing rates had increased slightly between the two cohorts (up three percentage points, from 55% for the Class of 1996 to 58% for the Class of 1999), but more so among graduates whose parents' highest level of parental educational attainment was a high school diploma or less (up 10 percentage points) than among graduates of the other two groups (up four percentage points) (Figure 5).

Figure 5
Percent of graduates who borrowed money (from any source) to finance their education, by highest level of parental educational attainment and graduating class



This increased borrowing rate is likely due to the combined impact of rapid increases in tuition and associated fees (the average Maritime tuition increased 28.2% from $2,915 in

1995-1996[5] to $3,738 in 1999-2000[6]) and the sweeping policy changes in government student financial assistance programmes since the early to mid 1990s. These changes include increased borrowing limits for the Canada Student Loan Program (1994-1995) and provincial changes in student assistance that moved from an all bursary to bursary/loan mix (PEI, 1994-1995; NB, 1993-1994), or from a bursary/loan mix to all loan (NS, 1993). Taken together, rising tuition costs, higher loan ceilings and decreases and/or elimination of grants and bursaries from government financial assistance programmes result in more students being eligible to accumulate government student loan debt. Further, due to the timing of most of these changes, they would have had a greater impact on Class of 1999 than Class of 1996 graduates. Finally, since these programmes are designed specifically to assist those students most in need (i.e., from lower income families), it is not surprising that borrowing rates increased more among graduates whose parents' highest level of educational attainment was a high school diploma or less.

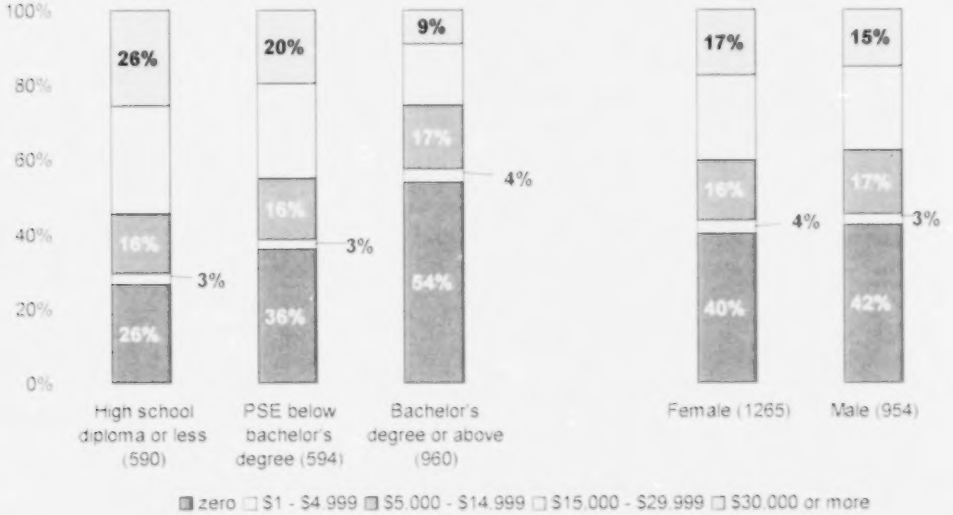
Results show that men and women have similar borrowing patterns; however, there are significant differences, as outlined below, in post-secondary wages and repayment patterns.

5. Amounts borrowed

Graduates with the lowest level of family educational attainment are the most likely to have borrowed in the highest range.

Borrowing patterns and total accumulated debt from all sources vary significantly by parents' highest level of education. Graduates with the lowest level of family educational attainment are the most likely to have borrowed in the highest range. Figure 6 illustrates the distribution of all first degree holders by the range of amount borrowed (all sources combined) by parental level of educational attainment for the 1999 degree programme.

Figure 6
Distribution of all first degree holders by range of amount borrowed (all sources combined) for the 1999 degree programme, by parental level of educational attainment and gender



There is a significant ($p<0.001$) difference in the distribution by range of amount borrowed by highest level of parental educational attainment. Findings show that while just over

1995-1996[18] to $3,738 in 1999-2000[19]) and the sweeping policy changes in government student financial assistance programmes since the early to mid 1990s. These changes include increased borrowing limits for the Canada Student Loan Program (1994-1995) and provincial changes in student assistance that moved from an all bursary to bursary/loan mix (PEI, 1994-1995; NB, 1993-1994), or from a bursary/loan mix to all loan (NS, 1993). Taken together, rising tuition costs, higher loan ceilings and decreases and/or elimination of grants and bursaries from government financial assistance programmes result in more students being eligible to accumulate government student loan debt. Further, due to the timing of most of these changes, they would have had a greater impact on Class of 1999 than Class of 1996 graduates. Finally, since these programmes are designed specifically to assist those students most in need (i.e., from lower income families), it is not surprising that borrowing rates increased more among graduates whose parents' highest level of educational attainment was a high school diploma or less.

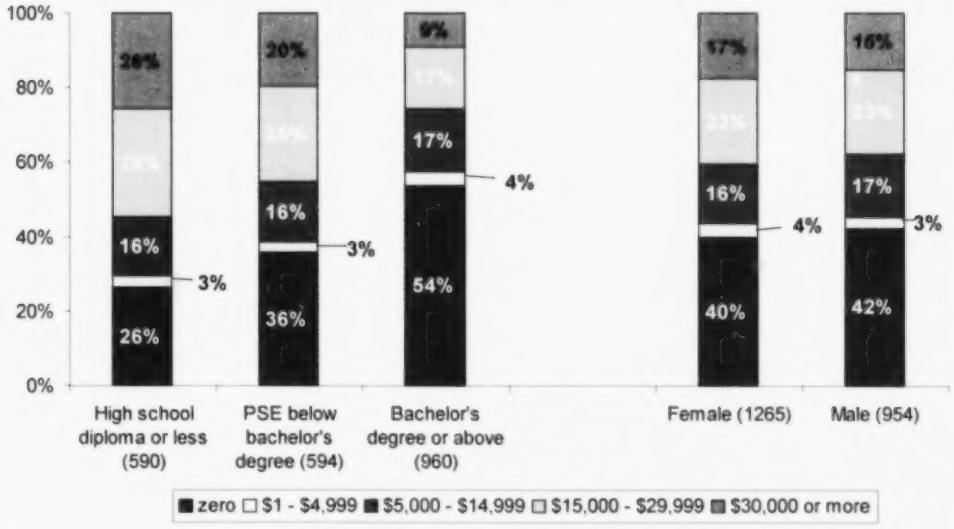
Results show that men and women have similar borrowing patterns; however, there are significant differences, as outlined below, in post-secondary wages and repayment patterns.

5. Amounts borrowed

Graduates with the lowest level of family educational attainment are the most likely to have borrowed in the highest range.

Borrowing patterns and total accumulated debt from all sources vary significantly by parents' highest level of education. Graduates with the lowest level of family educational attainment are the most likely to have borrowed in the highest range. Figure 6 illustrates the distribution of all first degree holders by the range of amount borrowed (all sources combined) by parental level of educational attainment for the 1999 degree programme.

Figure 6
Distribution of all first degree holders by range of amount borrowed (all sources combined) for the 1999 degree programme, by parental level of educational attainment and gender

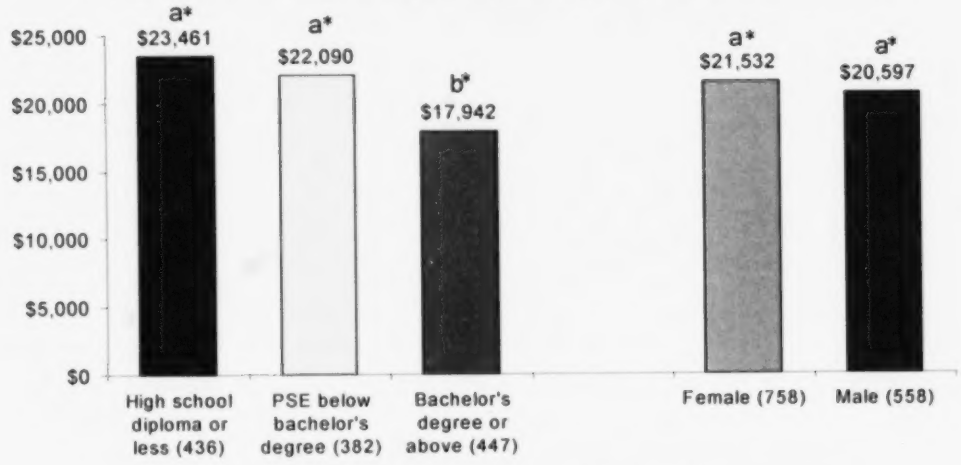


There is a significant ($p<0.001$) difference in the distribution by range of amount borrowed by highest level of parental educational attainment. Findings show that while just over

one-quarter (26%) of graduates whose parents attained a bachelor's degree or above had borrowed $15,000 or more, over half (55%) of graduates whose parents attained a high school diploma or less had borrowed in this range. There is no significant difference in the distribution by gender.

Among those who borrowed money to finance their 1999 degree, graduates whose parents' highest level of educational attainment was a high school diploma or less, or PSE below bachelor's degree, borrowed (all sources combined) significantly ($p<0.000$) more ($23,461 and $22,090, respectively) than graduates whose parents had attained a bachelor's degree or above ($17,942) (Figure 7).

Figure 7
Average amount borrowed (all sources combined), among those who borrowed, by highest level of parental educational attainment



*Within each group, means with the same letter are not significantly different (ANOVA, $p<0.000$).

Among Class of 1996 first degree holders who borrowed money, graduates from households where the highest level of educational attainment was a high school diploma or less borrowed on average $16,993, significantly more ($p<0.001$) than graduates from either the highest ($14,379) or middle ($15,526) parental educational attainment groups. There is no significant difference between men and women in the average amount borrowed overall.

6. Government student loan borrowing and repayment

As illustrated in Figure 4, much of the variation in overall borrowing between the highest level of parental educational attainment and the two lower levels is largely driven by variation in government student loan borrowing. Figure 8 illustrates the distribution of all first degree holders by the range of amount borrowed from government student loan programmes, by parental level of educational attainment and gender. Again, the relationship between parental educational attainment (serving as a proxy for family income) and government student borrowing is quite clear. Nearly half (47%) of those from households with the lowest level of educational attainment, and just 16% of those from households with the highest level of educational attainment, borrowed $15,000 or more. Furthermore, fully 69% of graduates

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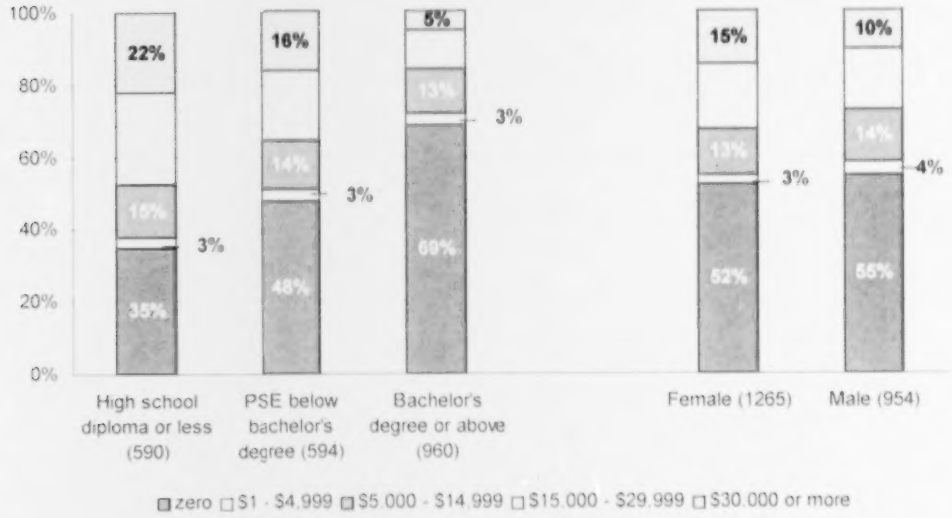
whose parents' education was a bachelor's degree or above did not borrow from government sources at all, as compared to 35% of graduates whose parents' highest level of education was a high school diploma or less. In addition, slightly greater proportions of women (33%) than men (27%) borrowed $15,000 or more.

Figure 8
Distribution of all first degree holders by the range of amount borrowed from government student loan programmes, by parental level of educational attainment and gender



Among those who borrowed, graduates from households with the highest level of educational attainment borrowed ($16,494) significantly ($p<0.000$) less than graduates of the other two groups (high school diploma or less, $22,582; PSE below bachelor's degree $21,432), again reflecting the family income-based eligibility requirements of government student loan programmes (Figure 9). The average amount borrowed from financial institutions, family members, and other sources does not differ significantly between the three groups.

Women borrowed significantly more than men from government student loan programmes; the difference in amount borrowed by gender is due in part to differences in level of parental educational attainment.

Women ($21,420) borrowed significantly ($p<0.001$) more than men ($18,949) from government student loan programmes (Figure 9). We can assume – if we recall the distribution of gender by parental level of education in Figure 3, where the highest percentage of men come from households where the highest level of education was a bachelor's degree or above – that the borrowing pattern observed in Figure 8 and the difference in amount borrowed by gender (Figure 9) are attributable at least in part to differences in highest level of parental educational attainment.

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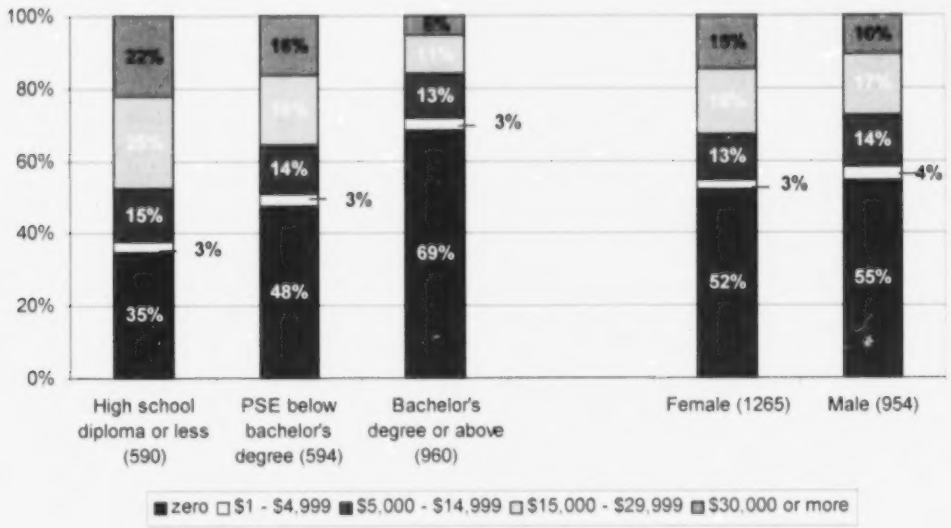

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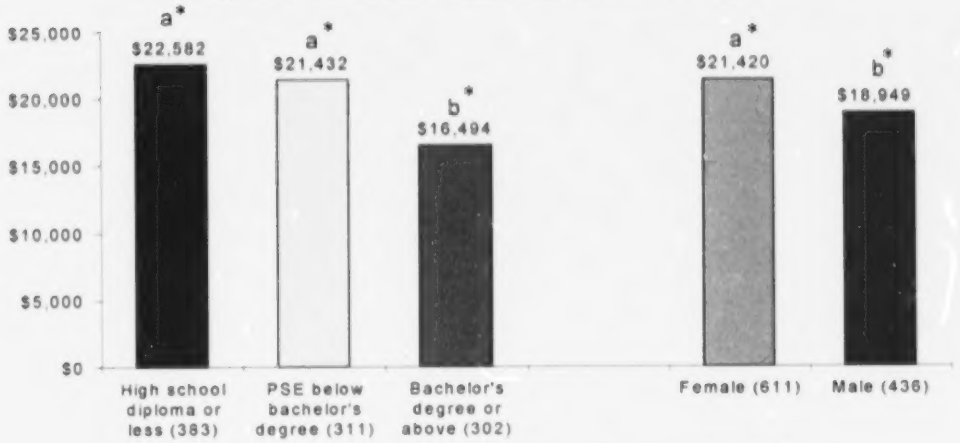
Figure 9
Average amount borrowed from government student loan programmes, by highest level of parental educational attainment and gender

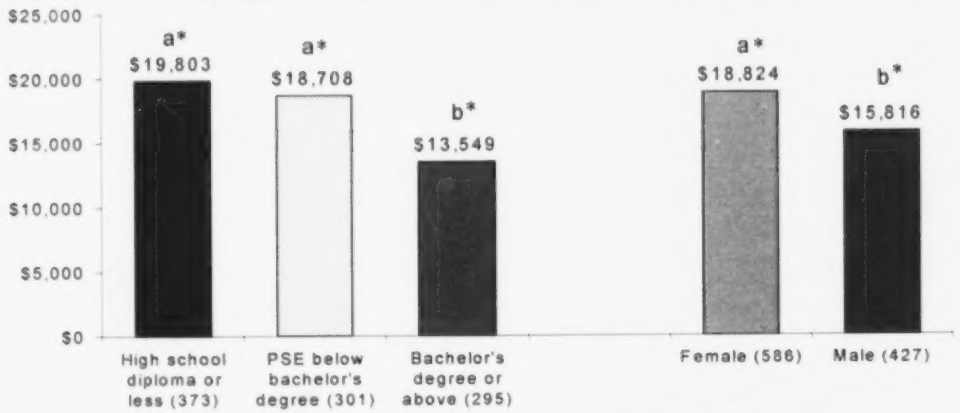


*Within each group, means with the same letter are not significantly different (ANOVA, p<0.000).

Thus far we have seen a difference between the parental educational attainment groups in the percentage borrowing from government student financial assistance programmes, and in the amounts borrowed. How do these groups compare in their repayment of these loans two years after graduation?

Figure 10 shows the amount remaining to be repaid on government student loans two years after graduation (among those who borrowed from this source), by highest level of parental educational attainment and gender. Graduates whose parents' highest level of educational attainment was a bachelor's degree or above owed significantly ($p<0.000$) less than the other two groups (high school diploma or less, and PSE below bachelor's degree). Two years after graduating, graduates whose parents' highest level of educational attainment was a high school diploma or less, or PSE below bachelor's degree, repaid 12% and 13% respectively of the total borrowed, while graduates whose parents' educational attainment was a bachelor's degree or above repaid 18%. The observed differences reflect differences in the amounts borrowed.

Figure 10
Average amount owing in 2001 on government student loans used to finance the 1999 degree, by highest level of parental educational attainment and gender



*Within each group, means with the same letter are not significantly different (ANOVA, p<0.000).

The amount owed two years after graduation differs significantly ($p<0.001$) by gender. On average, women repaid 12%, and men 17%, of their government loan. In addition, a significantly smaller proportion of female (7%) than male (13%) borrowers had repaid their government loan in full. This likely reflects the fact that women borrowed more than men on average. In addition to differences in borrowing, a possible explanation may lie in the significant differences in male and female weekly earnings. While male first degree holders earned, on average, $704 per week, their female counterparts earned just $530 per week.[20] Quite simply, female graduates earn less money, and this may affect their capacity to repay. The relationship between debt and earnings is further examined in Section 8.

Results also show there is a significant difference in the repayment status of male and female borrowers two years after graduation: women (44%) are significantly more likely than men (34%) to say that they had not yet started to repay their government student loans. Further investigation indicates that there is a combination of factors influencing the gender-based difference in this percentage. That is, if we look at only those graduates employed full time in the reference week and who had not returned to study post-1999, we find no significant difference by gender. The decreased likelihood among women to have a full-time job,[21] in combination with the choice to return to study (when government loan repayments can be suspended), seems to increase the likelihood that they have not begun to repay.

In the survey, graduates were asked if they had any help from parents, spouse, other family member, employer or someone else in repaying their accumulated debt (all sources). Among those who borrowed from government, we find no significant differences, by parental level of educational attainment, in the percentage reporting they received help from any of these sources (23% overall reporting receiving help from parents).

In addition, there are no significant differences by gender in the percentage reporting they received help in repaying their debt, with the exception of spouses. Among graduates who were married or living with a partner and who had borrowed from government student loan programmes, women (30%) are significantly ($p<0.000$) more likely than men (15%) to say their spouse helped with repayment.[22]

There is no difference by parental level of education in repayment status, or in the percent reporting difficulties repaying government student loans. It is also important to recall that there is no difference in average earnings by parental level of educational attainment.

7. Overall debt status

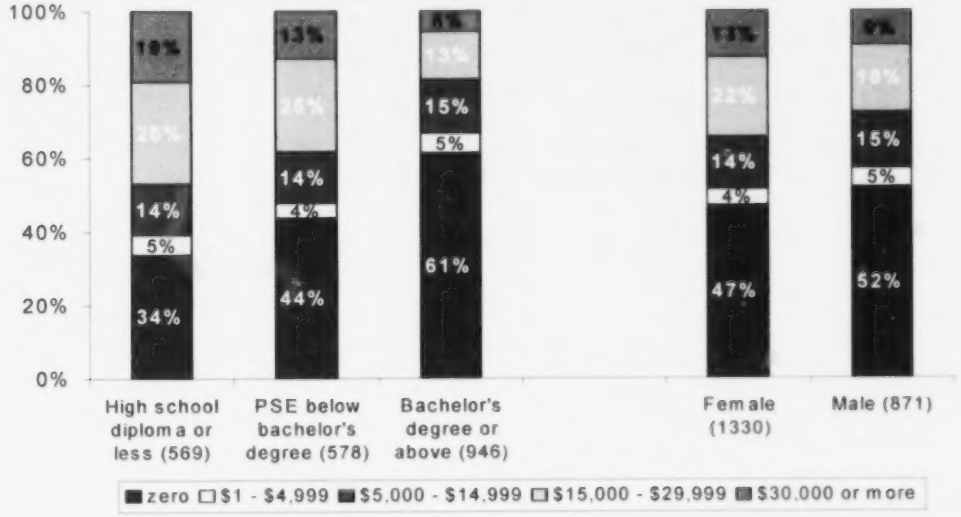
Graduates whose parents' highest level of educational attainment was a bachelor's degree or above are different from their peers.

Given the overall differences in borrowing patterns, how do we find graduates faring two years after graduation? Figure 11 shows a snapshot of the overall debt status (on loans from all sources taken out to finance the 1999 degree) of all first degree holders, by highest level of parental educational attainment and gender, two years after graduation. It clearly indicates that graduates whose parents' highest level of educational attainment was a

bachelor's degree or above are different from their peers. Two years after graduation, 60% of graduates were free of all debt associated with the 1999 degree, and just 6% owed $30,000 or more. By contrast, just over one-third (34%) of graduates whose parents' highest level of educational attainment was a high school diploma or less were free of all debt associated with the 1999 degree, while 19% owed $30,000 or more.

While they cannot be directly compared, Class of 1996 graduates surveyed one year after graduation showed a similar pattern to that observed in Figure 11.

Figure 11
Distribution of all first degree holders by range of amount owing in 2001 for loans taken out to finance the 1999 degree programme, by parental level of educational attainment and gender (includes those who borrowed nothing)



8. Debt-to-earnings ratio

Class of 1999 first degree holders comprise a very heterogenous group, with a mix of non-borrowers and borrowers, and among the latter, a wide range of debts, from under $5,000 to over $30,000. As a result, they are facing highly varying pressures in debt repayment. In this section, we investigate the relative burden of debt experienced by graduates. Analysis is limited to those who borrowed from at least one source to finance their 1999 degree, were actively making loan payments, and were employed in the reference week. The debt-to-earnings ratio is calculated as the ratio of monthly loan payments (on student loans from government and/or financial institutions, taken out to finance the 1999 degree and/or post-1999 study) to monthly employment income. A complete description of assumptions underlying the debt-to-earnings calculation may be found in the Methodology section. Figure 12 illustrates the range of debt-to-earnings ratios among employed first degree holders who had borrowed money to finance their 1999 degree.

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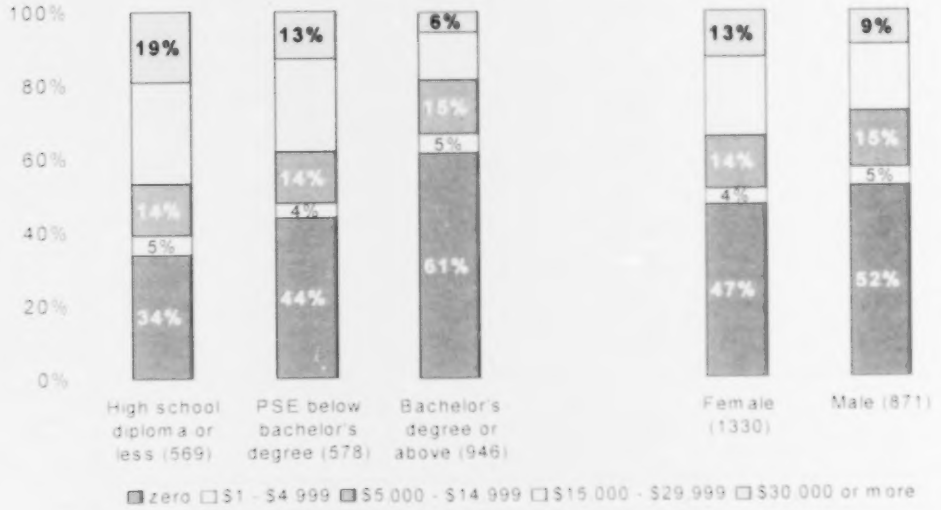

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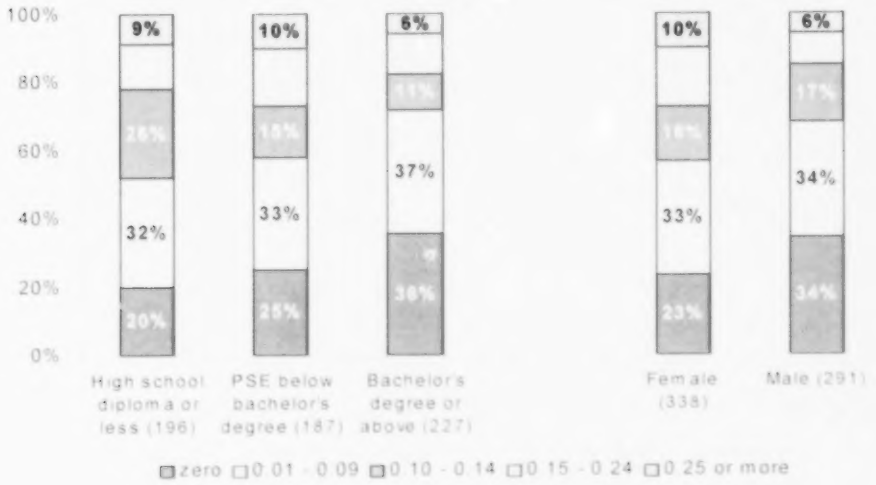
Figure 12
Distribution of employed first degree holders who borrowed money from at least one source to finance their 1999 degree, by range of debt-to-earnings ratio, by highest level of parental educational attainment and gender



The average debt-to-earnings ratio among graduates whose parents' highest level of educational attainment was a high school diploma or less or PSE below the bachelor's degree is 0.1. Both groups have significantly ($p<0.001$) greater debt-to-earnings ratios than the bachelor's degree or above group (0.08). The debt-to-earnings ratio of female graduates is 0.1, significantly greater than that of men (0.08). Given the findings reported in Section 3, this is not surprising as graduates' earnings differed by gender, not by level of parental educational attainment.

9. Pursuit of further education post-1999

Graduates whose parents' highest level of education was a high school diploma or less, or PSE below bachelor's degree, are significantly less likely than graduates from the most highly educated family backgrounds to have returned to study within two years of graduating.

As noted earlier, graduates from different family educational backgrounds face highly varying financial circumstances after graduation. Graduates whose parents' highest level of education was a high school diploma or less are less likely to report being debt-free two years after graduation, and more likely to have accumulated higher debt loads, than those whose parents' highest level of education was a bachelor's degree or above. In this section we explore factors involved in returning to study.

Findings reveal that graduates whose parents' highest level of education was a high school diploma or less (52%), or PSE below bachelor's degree (55%), are also significantly ($p<0.000$) less likely than graduates from the most highly educated family backgrounds (64%) (bachelor's degree or above) to have returned to study within two years of graduating (Figure 13).

Figure 12
Distribution of employed first degree holders who borrowed money from at least one source to finance their 1999 degree, by range of debt-to-earnings ratio, by highest level of parental educational attainment and gender

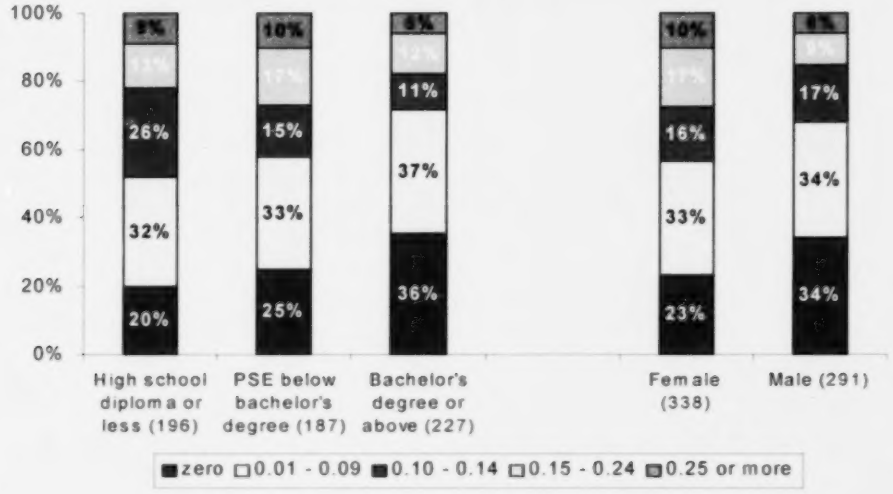


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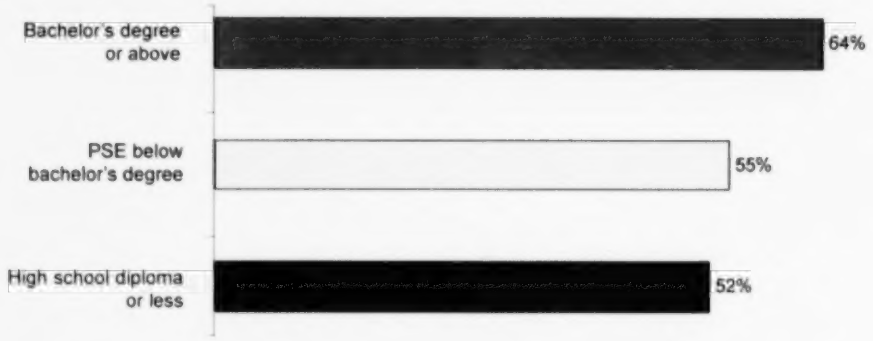
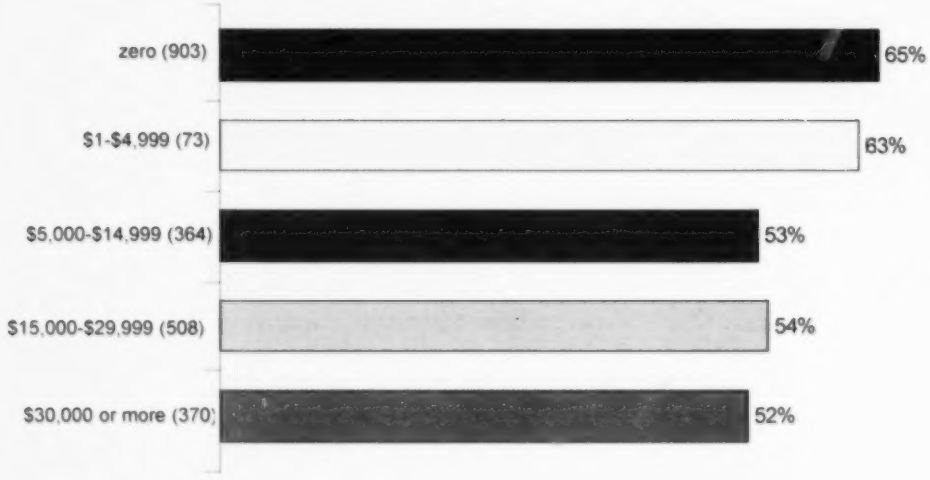
Figure 13
Percentage who returned to study to pursue a degree, diploma or certificate within two years of graduating in 1999 by level of parental educational attainment



However, while it is true that family educational background influences a student's educational path, studies have shown that undergraduate debt accumulation can also influence decisions to pursue further education.[23] And in fact, our findings show that those who borrowed nothing, or who borrowed in the low range (less than $5,000), returned to study at a rate of 65% and 63%, respectively, while those who borrowed $5,000-$14,999, $15,000-$29,999, or $30,000 or more returned to study at a rate of 53%, 54% and 52%, respectively (Figure 14). Further analysis shows that the distribution by range of amount borrowed does not vary significantly by field of study (programme completed in 1999).

Figure 14
Percentage of 1999 first degree holders who returned to study to pursue a degree, diploma or certificate within two years of graduating, by range of amount borrowed (all sources combined) to finance the 1999 degree



Graduates from households where the highest level of parental educational attainment was a bachelor's degree or above returned to school at a greater rate than their peers from households with lower levels of educational attainment.

The findings (Table 1) clearly indicate that graduates from households where the highest level of parental educational attainment was a bachelor's degree or above returned to school at a greater rate than their peers from households with lower levels of educational attainment. Furthermore, graduates who had not borrowed, or who had borrowed less than $5,000, returned to study at a greater rate than those who had borrowed $5,000 or more. As explored earlier in this study, parental educational attainment and borrowing patterns are interrelated. For this reason we performed a nested cross-tabulation to attempt to further elucidate the relationship between parental educational attainment, borrowing patterns, and the rate of return to study.

Table 1
Percentage who returned to study post-1999
by highest level of parental educational attainment and borrowing group

Parental level of educational attainment	Percentage who returned to study by borrowing range	
	$0 - $4,999	$5,000 or more
High school diploma or less (312)	58%	51%
PSE below bachelor's level (326)	**61%**	**51%**
Bachelor's degree or above (615)	**69%***	**58%***

*significantly different (Chi-square, p<0.000)

Table 1 shows that the correlation between parental educational attainment and returning to study is further compounded by borrowing patterns, and that both factors have an important influence. Within all parental educational attainment groups, borrowing $5,000 or more is associated with a decreased rate of return to study. However, the difference is statistically significant only among graduates from households where the highest level of educational attainment was a bachelor's degree or above ($p<0.000$).

Further investigation (Table 2) seems to indicate that this finding is related at least in part to the source of loans used to finance the 1999 degree. That is, among graduates who borrowed $5,000 or more, those from the most highly educated backgrounds (43%) are much more likely to report having borrowed from financial institutions (available to all students regardless of financial need) than are their counterparts from households where the highest level of education was a high school diploma or less (26%). The more stringent repayment terms on these types of loans – and perhaps the lack of "safety net" repayment assistance programmes for these loans – may very well have a negative impact upon a graduate's choice of returning to study if they use this source – i.e., they choose to focus on repayment rather than deferring repayment. Finally, if graduates who borrowed from financial institutions are excluded from the analysis, there is no significant difference in the return to study rate of graduates from the most highly educated family backgrounds by borrowing group.

Table 2
Among all graduates who borrowed $5,000 or more, percentage who borrowed from government and financial institutions, by highest level of parental educational attainment

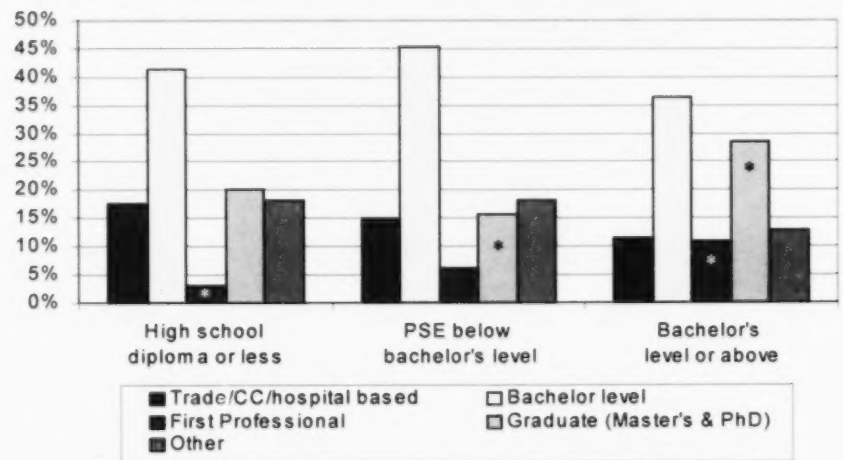
Parental level of educational attainment	Among graduates who borrowed $5,000 or more, percentage who borrowed from government and financial institutions	
	Government	Financial institutions
High school diploma or less (418)	90%	26%
PSE below bachelor's level (367)	**83%**	**33%**
Bachelor's degree or above (412)	68%	43%

We used a logistic regression model to estimate the factors influencing returning to study. Details of the variables used in the empirical analysis, descriptive statistics, and logistic regression results may be found under Appendix 1. Results of the analysis indicate that parental educational attainment, borrowing group, and use of loans from financial institutions all have a significant impact on returning to study; of these three variables, parental educational attainment shows the strongest effect. Specifically, coming from a household where the highest level of educational attainment was a bachelor's degree or above, increases the odds of a graduate returning to study by 1.4 times. Borrowing $5,000 or more, and borrowing from a financial institution, decreases these odds by 29% and 21%, respectively (regardless of level of parental educational attainment).

Parental educational attainment, borrowing group, and use of loans from financial institutions all have a significant impact on returning to study; of these three variables, parental educational attainment shows the strongest effect.

Among those who returned to study, graduates whose parents' highest level of education was a bachelor's degree or above are significantly more likely to return at an advanced (first professional and graduate) level of study than are graduates whose parents' highest level of education was below a bachelor's degree (Figure 15). This pattern is also observed in the Class of 1996, and is similar to Finnie and Garneau's[24] finding that students from backgrounds of higher socio-economic status are more likely to go on to graduate studies.

Figure 15
Percentage returning to school post-1999 by programme level and by level of parental educational attainment (among those who returned to study)



*Significantly different than expected (Chi-square, p<0.000)

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*significantly different (Chi-square, p<0.000)

Table 1 shows that the correlation between parental educational attainment and returning to study is further compounded by borrowing patterns, and that both factors have an important influence. Within all parental educational attainment groups, borrowing $5,000 or more is associated with a decreased rate of return to study. However, the difference is statistically significant only among graduates from households where the highest level of educational attainment was a bachelor's degree or above (p<0.000).

Further investigation (Table 2) seems to indicate that this finding is related at least in part to the source of loans used to finance the 1999 degree. That is, among graduates who borrowed $5,000 or more, those from the most highly educated backgrounds (43%) are much more likely to report having borrowed from financial institutions (available to all students regardless of financial need) than are their counterparts from households where the highest level of education was a high school diploma or less (26%). The more stringent repayment terms on these types of loans – and perhaps the lack of "safety net" repayment assistance programmes for these loans – may very well have a negative impact upon a graduate's choice of returning to study if they use this source – i.e., they choose to focus on repayment rather than deferring repayment. Finally, if graduates who borrowed from financial institutions are excluded from the analysis, there is no significant difference in the return to study rate of graduates from the most highly educated family backgrounds by borrowing group.

Table 2
Among all graduates who borrowed $5,000 or more, percentage who borrowed from government and financial institutions, by highest level of parental educational attainment

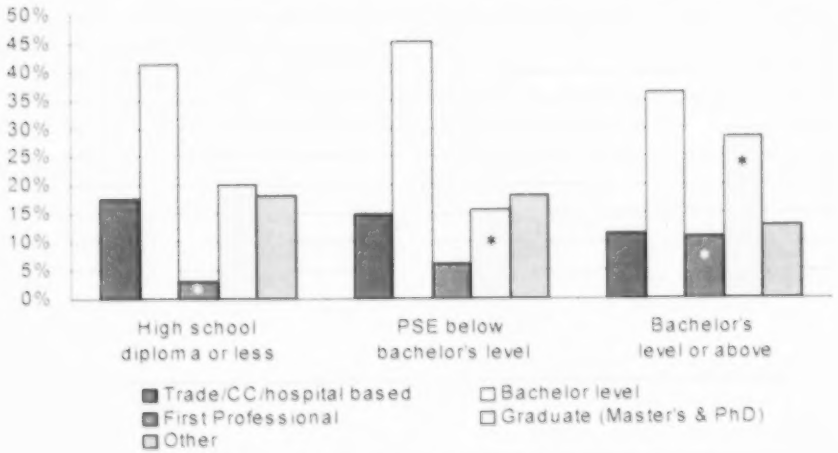
Parental level of educational attainment	Among graduates who borrowed $5,000 or more, percentage who borrowed from government and financial institutions	
	Government	Financial institutions
High school diploma or less (418)	90%	26%
PSE below bachelor's level (367)	83%	33%
Bachelor's degree or above (412)	68%	43%

We used a logistic regression model to estimate the factors influencing returning to study. Details of the variables used in the empirical analysis, descriptive statistics, and logistic regression results may be found under Appendix 1. Results of the analysis indicate that parental educational attainment, borrowing group, and use of loans from financial institutions all have a significant impact on returning to study; of these three variables, parental educational attainment shows the strongest effect. Specifically, coming from a household where the highest level of educational attainment was a bachelor's degree or above, increases the odds of a graduate returning to study by 1.4 times. Borrowing $5,000 or more, and borrowing from a financial institution, decreases these odds by 29% and 21%, respectively (regardless of level of parental educational attainment).

Parental educational attainment, borrowing group, and use of loans from financial institutions all have a significant impact on returning to study; of these three variables, parental educational attainment shows the strongest effect.

Among those who returned to study, graduates whose parents' highest level of education was a bachelor's degree or above are significantly more likely to return at an advanced (first professional and graduate) level of study than are graduates whose parents' highest level of education was below a bachelor's degree (Figure 15). This pattern is also observed in the Class of 1996, and is similar to Finnie and Garneau's[24] finding that students from backgrounds of higher socio-economic status are more likely to go on to graduate studies.

Figure 15
Percentage returning to school post-1999 by programme level and by level of parental educational attainment (among those who returned to study)



*Significantly different than expected (Chi-square, p<0.000)

10. Conclusion

First degree holders from diverse family educational backgrounds are equally successful in finding employment and enjoy comparable earnings.

Two years after graduation, first degree holders from diverse family educational backgrounds are equally successful in finding employment and enjoy comparable earnings. That graduates from households of lower levels of parental educational attainment were as successful in their labour market outcomes as their peers from more highly educated family backgrounds speaks to the role university education plays as a social equalizer. Indirectly, it also speaks to the role of government financial assistance programmes in enabling access to university education for those demonstrating the greatest need.

Indeed, findings show heavy use of government student loan programmes among first degree holders from households with lower levels of parental educational attainment. Graduates whose parents' highest level of educational attainment was a high school diploma or less – and to a somewhat lesser extent, graduates with parents whose highest level of educational attainment was PSE below a bachelor's degree – are more likely to borrow, and to borrow more, from government student loan programmes, than graduates from households where the highest level of educational attainment was a bachelor's degree or above.

These differences in borrowing patterns among the parental educational attainment groups translate into significant differences in financial status two years after graduation. In 2001, graduates whose parents' highest level of educational attainment was a high school diploma or less are less likely to be debt-free, and more likely to be coping with a higher debt-to-earnings ratio (even though, as noted in Section 3, earnings were not affected by level of parental educational attainment), than their peers from the most highly educated family backgrounds.

This study uncovers another important finding - not only does family educational background affect accessibility to university and completion of the first degree, but it also has a lasting impact on a graduate's decision to pursue further study after obtaining their first bachelor's degree. Specifically, among first degree holders, coming from a household where the highest level of educational attainment was a bachelor's degree or above increases the odds of returning to study by 1.4 times. These odds are further affected by borrowing patterns of graduates. Increased borrowing, and borrowing from financial institutions, both decrease the odds of returning to study.

As greater numbers of graduates from more highly educated family backgrounds begin to realize the returns of pursuing advanced study, an earnings gap based on family educational background may emerge.

While perhaps not surprising, considering the influence parental educational attainment has on a child's education decisions, the fact that graduates whose family have more limited educational achievements are less likely to pursue further study after obtaining a first degree, may nonetheless lead to a widening of the gap among social groups, especially in terms of labour market achievements. As greater numbers of graduates from more highly educated family backgrounds begin to realize the returns of pursuing advanced study, we may observe the emergence of an earnings gap based on family educational background. This warrants continued monitoring of graduate outcomes based on parental educational attainment.

With regard to gender differences, findings show that women borrowed more on average than men from government student loan programmes. This appears to be linked to family educational background, with the greatest percentage of men in the parental educational attainment group (bachelor's degree or above) that tended to borrow the least. The gender differences in repayment patterns, however, may in part be linked to the fact that women earned less, on average, than men.

This study also raises a series of questions that warrant further investigation and continued monitoring of graduate demographic profiles and outcomes:

Is there a family educational background component to the skewed gender ratios observed in university enrolments over the last several years?

First, is there a family educational background component to the skewed gender ratios observed in university enrolments over the last several years? The findings reported here suggest that this may be the case. The strong link between higher levels of parental education and increased participation in post-secondary education, particularly at the university level, may exert its strongest influence on men. This is suggested by the fact that the ratio of women to men is the closest to parity among first degree holders from households where the highest level of educational attainment was a bachelor's degree or above, and that nearly half (48%) of men come from households with this level of family educational attainment.

Is a combination of rising educational costs, increasing credit availability, and higher loan ceilings actually deterring the enrolment of students from lower income families?

Second, is a combination of rising educational costs, increasing credit availability, and higher loan ceilings (particularly for government needs-based aid) actually deterring the enrolment of students from lower income families (measured here by parental educational attainment as proxy)? Or, if this is not deterring enrolment, is it causing them to drop out before graduation? From another perspective, to what extent will the inclusion of greater proportions of students from the higher parental educational attainment groups, affect to the same extent, their propensity to further their education? This question is perhaps more salient for those students with a high parental educational attainment but lower to middle income. In effect, will we see a time where families, who strongly believe in the value of higher education having benefitted from it themselves, will simply feel that they cannot afford it?

It is not unreasonable to begin to suspect this is the case, given the significant shift in the demographic profile of graduates toward decreasing percentages from the lowest family educational background level. This speculation must be reserved, however, until more data are collected to verify whether or not the shift is indeed part of a longer term trend. In addition, a study of the attrition rates of university students by parental level of educational attainment would be very useful in addressing this question.

Third, for those students who need to draw on loans from financial institutions, do the more stringent repayment terms of these loans act as a deterrent to further study? The findings presented here suggest this may be the case. Again, further data will need to be collected and analysed to see if this is indeed the case for loans from sources other than government.

For those students who need to draw on loans from financial institutions, do the more stringent repayment terms of these loans act as a deterrent to further study?

Given changes in the design of government student financial assistance programmes, the disparity in graduate outcomes with respect to debt may not be unexpected. The growing financial gap between graduates of different family educational backgrounds, and gender, is however something that should be monitored closely by both provincial and federal governments, especially in light of the proposed changes that would make even more credit available. Effects of changes in grant-loan balance and the absence of safety net features in non-governmental borrowing should also be closely tracked.

Finally, the combined impact of parental educational attainment and borrowing patterns on the likelihood of returning to further study is a phenomenon warranting further study, given the possible interplay of two distinct findings: a shift toward greater proportions of graduates coming from more highly educated families furthering their education and rising debt loads.

We should not underestimate the societal implications of these questions. Access to post-secondary education, regardless of socio-economic background, has long been a major concern and is one of the keystones of government policies. As noted above, the fact that graduates from households of lower levels of parental educational attainment were as successful in their labour market outcomes as their peers from more highly educated family backgrounds speaks to the role university education plays as a social equalizer. Indirectly, it also speaks to the role of government financial assistance programmes in enabling access to university education for those demonstrating the greatest need. Any changes in either intended or unintended impacts of student financial assistance policies could however rapidly change this picture.

METHODOLOGY

Statistics presented in this study are based on data from the MPHEC's *Survey of 1999 Maritime University Graduates in 2001*. Where appropriate, comparisons are made to the Class of 1996 surveyed in 1997. All statistics are based on weighted data.

Further information on these surveys may be obtained by contacting the Maritime Provinces Higher Education Commission by phone: (506) 453-2844, by fax: (506) 453-2106, by email: mphec@mphec.ca by visiting the website (www.mphec.ca) or by writing: Maritime Provinces Higher Education Commission, 82 Westmorland Street, Suite 401, P.O. Box 6000, Fredericton, NB E3B 5H1.

The analysis is limited to a subsample (n=2317) of graduates referred to as first degree holders. A first degree holder is defined as a graduate who completed a bachelor's degree and enrolled in this programme with a high school diploma as their highest completed level of education.

A key variable in this analysis is the highest level of parental educational attainment. The survey collects information on the highest level of education attained by the graduate's mother and father. From this information, three categories are constructed: high school diploma or less (n=614), PSE below bachelor's degree (includes trade, community college or hospital-based certificates or diplomas, and completion of a university certificate or diploma below the bachelor's level, or attendance at university without earning a credential)(n=605), and bachelor's degree or above (includes bachelor's, first professional, master's or PhD degrees, and graduate level certificates/diplomas) (n=977). These categories combine both the mother's and father's highest level of education, and the category is assigned based on the highest level of education of the pair. Excluded from analysis are those graduates who did not know or declined to report the highest level of education of either parent (n=86).

In terms of student loan data, the survey collects information on whether or not graduates borrowed money to finance their 1999 degree and any post-1999 studies; borrowers are then asked to report the amount of money borrowed in each case from four possible sources: government student loan programmes, private loans from financial institutions, family members, and other sources (this could include credit cards). They are also asked to report the amounts owing on these loans in 2001 and loan payment information, if applicable. Monthly loan payment amounts are calculated for each source. In the 1997 survey instrument for the Class of 1996, students were asked to report student loan borrowing from government and other sources. Loans from financial institutions and family members are not differentiated.

The following is a description of the parameters involved in the calculation of the debt-to-earnings ratio (total monthly loan payment / monthly employment earnings)

- Only payments made to government or financial institutions for loans taken out to finance the 1999 degree and/or post-1999 study are included when calculating the total monthly loan payment. Any loan payments made to family members (n=214) or other sources (n=45) are not included in the total. In the former case, this is due to the informality of this type of loan, and in the latter, this is due to the variety of possible sources within the category.

- Only graduates employed in the reference week (the week prior to being interviewed) are included in the analysis.

- If a graduate did not borrow from a particular source for either the 1999 degree or post-1999 study, the payment amount to that source is set to $0 in the equation.

- The total monthly payment is set to $0 for graduates who borrowed nothing for either the 1999 degree or post-1999 study.
- Graduates who borrowed money from a particular source, but had not yet begun repayments, are not included in the analysis.
- Graduates whose payment on any 1999 government or financial institution loan included payments for other student or personal loans are not included in the analysis.
- Graduates who did not know or refused to report a loan payment are not included in the analysis.
- Including all assumptions, the sample size for this analysis is n= 624.

Statistical analyses

In all cases, the confidence level determining significance is set at 95%. All statistics are based on weighted data. Main effects in ratio/continuous data are tested using one-way ANOVA (SPSS version 10.0). Differences between groups are tested using the Student-Neuman-Keuls test. Differences in proportions (ordinal/categorical data) are tested using Chi-Square (SPSS version 10.0).Notable differences are identified using adjusted standardized residuals.

APPENDIX 1

Logistic Regression Model

Table A: Variables

Variable	Variable Description
	This variable combines both the mother's and father's highest level of education;the category is assigned based on the highest level of education of the pair.
ParentEd	0=below bachelor's degree; 1=bachelor's degree or above
	Total amount borrowed to finance the 1999 degree
BorrowGp	0=borrowed $0-$4,999; 1=borrowed $5,000 and more
	Incidence of borrowing from financial institutions
FIN	0=did not borrow from financial institutions; 1=borrowed from financial institutions
	Dependent variable - Incidence of returning to study post-1999
PostEd	0=did not return; 1=did return

Table B: Descriptive Statistics

Descriptive Statistics

Variable	n	Minimum	Maximum	Mean	Std. Deviation
ParentEd	2196	0.00	1.00	0.4448	0.4971
BorrowGp	2219	0.00	1.00	0.5810	0.4935
FIN	2264	0.00	1.00	0.1964	0.3974
PostEd	2280	0.00	1.00	0.5601	0.4965

Table C: Logistic Regression Results

Logistic Regression Results

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	49.219	3	0
	Block	49.219	3	0
	Model	49.219	3	0

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
ParentEd	0.357031431	0.092090893	15.03071142	1	0.000	1.429
BorrowGp	-0.343236619	0.099673649	11.8584115	1	0.001	0.709
FIN	-0.239460923	0.118251999	4.100646405	1	0.043	0.787
Constant	0.430909826	0.085065052	25.66081544	1	0.000	1.539

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3. Graduates completed this survey two years after graduation, that is several years after they attended high school. While the survey collects information on their current financial situation, it was not possible, within the 25-minute survey, to collect reliable information on graduates' financial situation while growing up. As a result, a proxy to characterize graduates' familial socio-economic status was developed using parental educational attainment as the key variable. This is similar to the methodology used in R. Finnie "Student Loans: Borrowing and Burden." *Education Quarterly Review.* Vol. 8 no. 4. 2002.

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